

REMARKS

In view of the above-amendments and the following remarks, reconsideration and further examination are requested.

By this amendment, claims 37-51 have been canceled in favor of new claims 52-66. Therefore, claims 1-51 are canceled and claims 52-66 are pending.

Claims 37-51 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hinoshita in view of Resch and Snijders. This rejection is traversed and is inapplicable to new claims 52-66.

First, please note that independent claims 37, 39, 41, 46, 48, and 50 have been canceled in favor of independent claims 52, 54, 56, 61, 63, and 66, which include the additional limitation that the digital filter has an amplitude versus frequency characteristic which comprises (i) a VSB characteristic covering a frequency band including a carrier frequency, and (ii) a roll-off characteristic. Support for the claim amendments can be found at least at Fig. 62, Fig. 174, and column 59 line 49 to column 60, line 23.

The Examiner acknowledges that the primary reference Hinoshita does not disclose that the filter is a digital filter or that the filter includes a roll-off characteristic. The Examiner relies on Resch as teaching a VSB filter having a roll-off characteristic. The Examiner refers to column 4, line 55 to column 5, line 21 of Resch, which discusses the characteristics of the filter.

The roll off characteristic of Resch is a roll off characteristic of the time delay t_d . This roll off characteristic of the time delay t_d is illustrated in the filter's phase response shown in Fig. 2 of Resch, whereas the filter's amplitude response is shown in Fig. 1 of Resch. As can be seen in Fig. 1 of Resch, the amplitude response is an amplitude to frequency characteristic of the filter, whereas the phase response is a time delay (t_d) to frequency characteristic. Please refer to column 4, line 55 to column 5, line 21 of Resch, which clearly sets forth that the VSB characteristic is part of the amplitude response, which is shown as an amplitude to time graph (Fig. 1) and that the roll-off of the time delay t_d is a roll-off in the phase response, which is shown as a time delay t_d to frequency graph (Fig. 2).

Unlike Resch, the present invention is not directed to a roll-off of the phase response or time delay of the filter. Rather, the claimed VSB characteristic and roll off characteristic are part of the

amplitude to frequency characteristics of the filter. Accordingly, the independent claims have been amended to explicitly recite that the digital filter has an amplitude versus frequency characteristic which comprises (i) a VSB characteristic covering a frequency band including a carrier frequency, and (ii) a roll-off characteristic. Such a filter is not disclosed by Resch. Rather, Resch discloses a filter “designed to have a time delay versus frequency characteristic of a receiver equalizer.” See column 4, lines 61-62. In the filter of Resch, “the time delay characteristic of the VSB filter begins to roll off at frequencies more than 3 MHz below the IF carrier frequency.” See column 5, lines 14-16. Such a filter of Resch, having both a VSB characteristic and a delay time to roll-off results in a filter that “provides both the VSB filtering and the receiving equalization required of the transmitter.” See column 5, lines 19-21.

As is clear from the above discussion, Resch does not disclose or in any way suggest a digital filter having an amplitude versus frequency characteristic which comprises (i) a VSB characteristic covering a frequency band including a carrier frequency, and (ii) a roll-off characteristic as recited in each of claims 52, 54, 56, 61, 63, and 66. Therefore, no combination of the teachings of Resch and Hinoshita would result in the inventions recited in claims 52, 54, 56, 61, 63, and 66 of the present application. Accordingly, claims 52-66 would not have been obvious in view of any combination of Hinoshita and Resch.

The Examiner relies on Snijders for teaching a digital filter. While Snijders does illustrate a digital filter 3 in Fig. 1, the reference does not disclose or suggest a digital filter having an amplitude versus frequency characteristic which comprises (i) a VSB characteristic covering a frequency band including a carrier frequency, and (ii) a roll-off characteristic as recited in each of claims 52, 54, 56, 61, 63, and 66. Therefore, no combination of the teachings of Snijders with Resch and/or Hinoshita would result in the inventions recited in claims 52, 54, 56, 61, 63, and 66 of the present application. Accordingly, claims 52-66 would not have been obvious in view of any combination of Hinoshita, Resch, and Snijders.

In view of the above, it is submitted that the present application is in condition for allowance.

The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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